UNITED STATES PATENT AND TRADEMARK OFFICE

A

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,681	04/09/2001	Rusty Shawn Lee		6786

7590 10/05/2005

Rusty S. Lee
1525 Wilder Ave. #606
Honolulu, HI 96822

EXAMINER	
STEVENS, THOMAS H	

ART UNIT	PAPER NUMBER
2123	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/828,681	LEE, RUSTY SHAWN	
	Examiner	Art Unit	
	Thomas H. Stevens	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-28 were examined.

Section I: Non-Final Office Action (3rd Office; RCE)

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Bierbaum et al. "Software Tools for Virtual Reality Application Development" (1998); (hereafter Bierbaum). Bierbaum discloses a discussion of features to look for when choosing a development environment for virtual reality applications (abstract).

Claim 1. A method executed by a mechanical, electronic or computer system for generating machine control instructions (pg.3-24, 2nd paragraph with boxed software code), said method comprising the steps of: reading in a user input to select an object library (pg.3-9, Extensibility) of objects, wherein the objects include one or more sets of machine control instructions (pg.3-24, 2nd paragraph with boxed software code) for performing one or more functions; connecting the selected object to a network (pg.3-20, Description, 2nd paragraph; pg.3-25, High-Level Scripting Interface) of objects which

includes objects previously selected and connected by the user: said connecting step comprising identifying the inputs and outputs of the object selected in said reading step and connecting such inputs and outputs to inputs and outputs of other objects in the network (pg.3-20, Description, 2nd paragraph; pg.3-25, High-Level Scripting Interface); said connecting step resulting in the formation of an aggregate comprising the network (pg.3-20, Description, 2nd paragraph; pg.3-25, High-Level Scripting Interface) of objects and the connections between connected objects; generating machine control instructions (pg.3-24, 2nd paragraph with boxed software code) via employing instructions (pg.3-24, 2nd paragraph with boxed software code) now contained in the network (pg.3-20, Description, 2nd paragraph; pg.3-25, High-Level Scripting Interface) of objects; responsive to said generating step, effecting updates (pg.3-20, Description section, 3rd paragraph) within the aggregate of the network (pg.3-20, Description, 2nd paragraph; pg.3-25, High-Level Scripting Interface) of objects and the connections between connected objects to accurately reflect any changes made to the machine control instructions (pg.3-24, 2nd paragraph with boxed software code) generated in said generating step.

Claim 2. The method of claim 1, wherein said generating step and said step of effecting updates (pg.3-20, Description section, 3rd paragraph) are deferred until the user has completed constructing an entire network (pg.3-20, Description, 2nd paragraph; pg.3-25, High-Level Scripting Interface) of objects.

Claim 3. The method of claim 1, wherein the functions contained in the objects are used to generate the corresponding sets of instructions (pg.3-24, 2nd paragraph with boxed software code) for inclusion in the generated machine control instructions (pg.3-24, 2nd paragraph with boxed software code).

Claim 4. The method of claim 1, wherein wherein the generated machine control instruction included computer instructions (pg.3-24, 2nd paragraph with boxed software code) to load the code libraries represented by the objects.

Claim 5. The method of claim 1, wherein the user is a computer program (pg.3-8, API's and Languages).

Claim 6. The method of claim 1, wherein the machine control instructions (pg.3-24, 2nd paragraph with boxed software code) are computer instructions (pg.3-24, 2nd paragraph with boxed software code) belonging to an instruction set architecture.

Claim 7. The method of claim 1, wherein the machine control instructions (pg.3-24, 2nd paragraph with boxed software code) include source code in a computer programming (pg.3-8, API's and Languages) or scripting language.

Claim 8. The method of claim 1, further comprising the step of translating or compiling the machine control instructions (pg.3-24, 2nd paragraph with boxed software code) into

another format (pg.3-10, last paragraph) of machine control instructions (pg.3-24, 2nd paragraph with boxed software code).

Claim 9. The method of claim 1, wherein the library (pg.3-9, Extensibility) of objects includes primitive operators for mathematical operations (pg. 3-7, High-Level Low-Level Interface).

Claim 10. The method of claim 1, wherein the library (pg.3-9, Extensibility) of objects includes container of objects that container other objects (pg.3-25, High-Level Scripting Interface) or data.

Claim 11. The method of claim 1, wherein the user input is generated by the manipulation of graphical depictions of objects on a computer or video display screen or monitor, said manipulation being controlled by a computer mouse or a keyboard or some combination of a computer mouse and keyboard (pg. 3-10, Supported VR Hardware).

Claim 12. The method of claim 1, wherein the user inputs (pg.3-20, Description section, 3rd paragraph) include the manipulation in physical space of virtual (title and Introduction) representations of the objects, provided by a virtual (title and Introduction) reality system.

Claim 13. The method of claim 12, wherein the virtual (title and Introduction) reality system includes a force-feedback or haptic interface (pg.3-2 to 3-3, Introduction, 2nd paragraph; pg.3-5, 1st paragraph).

Claim 14. The method of claim 1, wherein the user input includes movement and connection of physical objects in physical space corresponding to objects in the library (pg.3-9, Extensibility).

Claim 15. The method of claim 1, further comprising of the step of removing any number of objects (pg.3-18, 3rd paragraph) from the network (pg.3-20, Description, 2nd paragraph; pg.3-25, High-Level Scripting Interface) in response to user inputs (pg.3-20, Description section, 3rd paragraph).

Claim 16. The method of claim 1, further comprising of the step of modifying existing connections of objects in the network (pg.3-20, Description, 2nd paragraph; pg.3-25, High-Level Scripting Interface) in response to user inputs (pg.3-20, Description section, 3rd paragraph).

Claim 17. The method of claim 1, further comprising of the step of monitoring or tracing (equivocates tracing and tracking; pg.-21, 1st paragraph) the path of data flow and execution of the generated code by visually indicating activity in active objects in the network (pg.3-20, Description, 2nd paragraph; pg.3-25, High-Level Scripting Interface).

Claim 18. The method of claim 1, wherein the user inputs (pg.3-20, Description section, 3rd paragraph) are provided by at least one user over a network (pg.3-20, Description, 2nd paragraph; pg.3-25, High-Level Scripting Interface) connection.

Claim 19. The method of claim 1, wherein said step of effecting updates (pg.3-20, Description section, 3rd paragraph) comprises updating the network (pg.3-20, Description, 2nd paragraph; pg.3-25, High-Level Scripting Interface) of objects to reflect changes made by at least one remote user over a network (pg.3-20, Description, 2nd paragraph; pg.3-25, High-Level Scripting Interface) connection.

Claim 20. The method of claim 1, further comprising the step of creating at least one new object of machine control instructions (pg.3-24, 2nd paragraph with boxed software code) from the generated code.

Claim 21. A method for constructing a high-level object model from generated machine control instructions (pg.3-24, 2nd paragraph with boxed software code), said method comprising the steps of: reading in a sequence of machine control instructions (pg.3-24, 2nd paragraph with boxed software code) for performing one or more functions; searching a library (pg.3-9, Extensibility) of objects for one or more matching objects configured for generating the sequence of machine control instructions (pg.3-24, 2nd paragraph with boxed software code) so matched to determine the objects connected to the inputs and outputs of each matching object found in the library (pg.3-9, Extensibility) of objects in said searching step: connecting each matching object found in the library

(pg.3-9, Extensibility) of objects to the other objects in a high-level model found in the reading, searching and parsing steps.

Claim 22. The method of claim 21, wherein the original machine control instructions (pg.3-24, 2nd paragraph with boxed software code) have been from a source file by a compiler (pg.3-8, last paragraph).

Claim 23. The method of claim 21, wherein the user is a computer program (pg.3-8, API's and Languages).

Claim 24. The method of claim 21, further comprising a final step of generating machine control instructions (pg.3-24, 2nd paragraph with boxed software code) from the high-level model.

Claim 25. The method of claim 24, wherein the format of the newly generated machine control instructions (pg.3-24, 2nd paragraph with boxed software code) differs from that of the original machine control instructions (pg.3-24, 2nd paragraph with boxed software code).

Claim 26. The method of claim 21, further comprising of the step of modifying connections of objects in the network (pg.3-20, Description, 2nd paragraph; pg.3-25,

High-Level Scripting Interface) in response to user inputs (pg.3-20, Description section, 3rd paragraph).

Claim 27. The method of claim 21, further comprising of the step of monitoring or tracing (equivocates tracing and tracking; pg.-21, 1st paragraph) the path of data flow and execution of the generated code by visually indicating activity in active objects in the network (pg.3-20, Description, 2nd paragraph; pg.3-25, High-Level Scripting Interface).

Claim 28. The method of claim 21, wherein the user inputs (pg.3-20, Description section, 3rd paragraph) are provided by at least one user over a network (pg.3-20, Description, 2nd paragraph; pg.3-25, High-Level Scripting Interface) connection.

Section II: Response to Applicants' Arguments (Final Office Action)

102/103 Rejections

4. Applicants are thanked for addressing this issue. Both rejections in this manner are rejected; however, based on a updated search, a new rejection commences in view applicants' amendment.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Tom Stevens whose telephone number is 571-272-

3715, Monday-Friday (8:00 am- 4:30 pm) or contact Supervisor Mr. Leo Picard at (571) 272-3749. Central Fax number is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

September 30, 2005

Paul L. Rodriguez 9/30/05

Primary Examiner
Art Unit 2125

THS